

BULLETIN: CV-700-T-67  
 PRICES & DATA  
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 FILE: CHECK VALVES

# 3-WAY CHECK VALVES

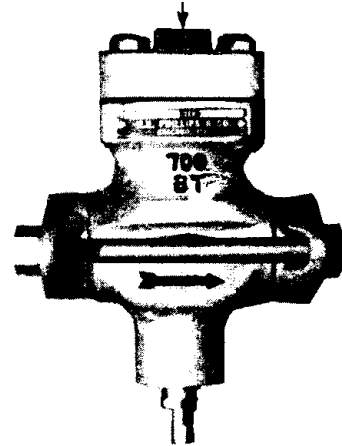
SERIES 700-T

DESCRIPTION

The Series 700-T 3-way check valves are flanged, piston type, with a replaceable seat disc made from teflon. They have a spring beneath the piston that holds the valve in an open position during normal operation so that no bleed to the downstream side is necessary to maintain fully open port.

A line from a high pressure gas source enters the 3-way check valve through the top bonnet, and is normally closed utilizing a solenoid valve. When the solenoid valve is opened high pressure gas enters above the piston and closes the main port. Gas then flows through the center of the piston, to the upstream side of the valve in a direction opposite to the arrow on the valve body. This will raise the upstream pressure to a level determined by a regulator, or a PHILLIPS Series 700 valve in the circuit. While the main port

'E' HOT GAS INLET



is closed there is a small bleed to the downstream side. When the solenoid valve is shut, the 3-way check valve immediately opens and restores full flow in the direction of the arrow.

ORDERING INSTRUCTIONS

Specify valve number, & size and type of connections.

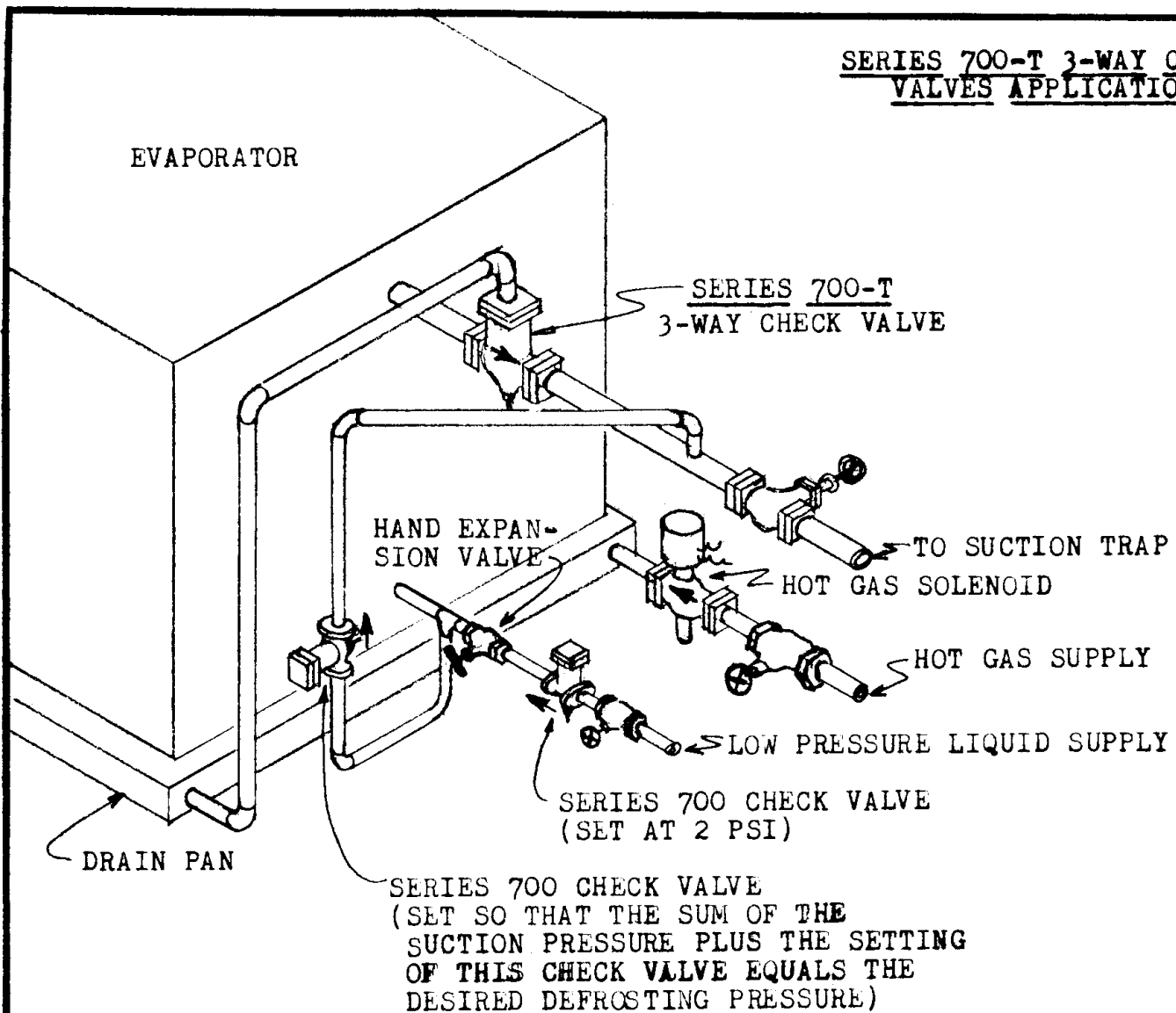
## 3-WAY CHECK VALVES - SERIES 700-T

VALVE NUMBER	FLANGED CONNECTIONS(IPS)	'E' FPT.	SHP'G. WT.LBS.	LIST PRICES
700-T	1" THREADED OR SOCKET 1½" THREADED OR SOCKET	1/2"	20	\$ 76.00
700-AT	1½" THREADED OR SOCKET	3/4"	40	120.00
	1½" WELD NECK			129.00
	2" THREADED OR SOCKET			120.00
	2" WELD NECK			129.00
700-BT	3" THREADED OR SOCKET	1"	75	178.00
	3" WELD NECK			190.00
700-DT	4" SOCKET	1½"	140	310.00
	4" WELD NECK			327.00



H.A. PHILLIPS & CO., 3255 W. CARROLL AVE., CHICAGO, ILL. 60624 312/638-1116

SERIES 700-T 3-WAY CHECK VALVES APPLICATION



The Series 700-T valve in the suction line is normally in the fully open position while the evaporator is operating at suction pressure. When at the start of the defrosting period the hot gas solenoid valve is opened, hot gas is first directed through the coil in the drain pan, and then is directed to the top of the 700-T valve. The 700-T valve closes, and the hot gas then feeds directly through the piston into the evaporator. Some gas bleeds around the piston in order to keep the 700-T valve closed. Pressure in the coil closes the 700 valve in the liquid feed line. Pressure in the coil continues to build up during defrosting until the spring setting of the 700 check valve in the liquid-to-suction by-pass line is exceeded. This line is looped down so that liquid will drain out of the coil to facilitate defrost. When the hot gas solenoid valve is closed at the end of the defrost period the 700-T valve will open to vent the evaporator pressure.

When the liquid supply to the evaporator is from a high pressure source a solenoid valve is used instead of the liquid line check valve.

Do not use the Series 700-T check valves on evaporators that are top fed from the liquid line. Instead, use the Series 700-S type of suction line check valve, shown on another bulletin.